



DOCKET NO: 216379US2

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF :  
HIROSHI SUGIURA, ET AL. : EXAMINER: MARTIN, A.  
SERIAL NO: 09/990,264 :  
FILED: NOVEMBER 23, 2001 : GROUP ART UNIT: 1745  
FOR: FUEL CELL OUTPUT :  
CHARACTERISTIC ESTIMATION  
APPARATUS AND OUTPUT  
CHARACTERISTIC ESTIMATION  
METHOD, FUEL CELL SYSTEM AND  
VEHICLE HAVING THE SAME, AND  
FUEL CELL OUTPUT CONTROL  
METHOD AND DATA STORAGE  
MEDIUM

DECLARATION UNDER 37 C.F.R. § 1.132

COMMISSIONER FOR PATENTS  
ALEXANDRIA, VIRGINIA 22313

SIR:

The undersigned declarant, Kouta Manabe herein declares as follows:

1. That I have received a Bachelors Degree from Osaka University, Department of Electrical Engineering, in 1996. I have been employed by Toyota Motor Company as an engineer since 1996. Since that time, I was involved in the development of transaxles for hybrid vehicles from 1996 to 1999, and in the development of fuel cells from 1999 until the present time.
2. That I am a named inventor in the above referenced U.S. patent application, and I am familiar with its contents.

3. That fuel cells, for example polymer electrolyte fuel cells, are designed to provide a nominal power output characteristic for any given hydrogen fuel supply pressure and fuel cell temperature. However the actual power output is gradually reduced due to the ageing degradation of the fuel cell components over an extended period of time so that the nominal power output characteristic cannot be produced. The reduction in the nominal power output due to ageing degradation of the fuel cell components is gradual and becomes noticeable only after several hundred hours of use.

4. That one skilled in the art of fuel cells would understand from the disclosure of the above referenced U.S. patent application, particularly at paragraphs [0004] and [0006] thereof, that the description therein of a change in the output characteristic of the fuel cell used for an extended period of time refers to the reduction in the actual power output, as compared to the nominal power output, due to ageing degradation of the fuel cell components over several hundred hours, or more, of use.

5. That one skilled in the art of fuel cells would understand that estimating "the output characteristic of the fuel cell after the output characteristic of the fuel cell has undergone a change due to aging degradation of the fuel cell over time" means estimating the reduction in the actual power output, as compared to the nominal power output, due to ageing degradation of the fuel cell components over several hundred hours, or more, of use. One skilled in the art would not understand "the output characteristic of the fuel cell has undergone a change due to aging degradation of the fuel cell over time" to mean a change in power output due to changes in fuel supply pressure or fuel cell temperature because this change in power output is not due to ageing degradation of the fuel cell components.

I declare that all statement made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of this application or any patent issuing thereon.

Date: November 29, 2006

Kouta Manabe  
Kouta Manabe